

# AC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

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## Nominal data

<b>Type</b>	<b>W6D800-GD01-01</b>		
<b>Motor</b>	<b>M6D138-LA</b>		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	880	670
Power consumption	W	1940	1210
Current draw	A	3.9	2.23
Max. back pressure	Pa	160	92
Max. back pressure	in. wg	0.64	0.37
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	60
Starting current	A	13	4.3

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change

## Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	35.2	35.2	09 Power consumption $P_e$	kW	1.77
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	16545
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	136
04 Efficiency grade N		40	40	10 Speed (rpm) n	min <sup>-1</sup>	900
05 Variable speed drive		No		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

LU-201162



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## Technical description

<b>Weight</b>	44 kg
<b>Size</b>	800 mm
<b>Motor size</b>	138
<b>Rotor surface</b>	Cast in aluminum
<b>Terminal box material</b>	PP plastic
<b>Blade material</b>	Sheet aluminum insert, sprayed with PP plastic
<b>Fan housing material</b>	Sheet steel, galvanized and coated with black plastic (RAL 9005)
<b>Guard grille material</b>	Steel, coated with black plastic (RAL 9005)
<b>Number of blades</b>	5
<b>Blade pitch</b>	0°
<b>Airflow direction</b>	V
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H2
<b>Ambient temperature note</b>	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	On rotor and stator sides
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) with basic insulation
<b>With cable</b>	Axial
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60034-1 (2010); CE
<b>Approval</b>	VDE; EAC

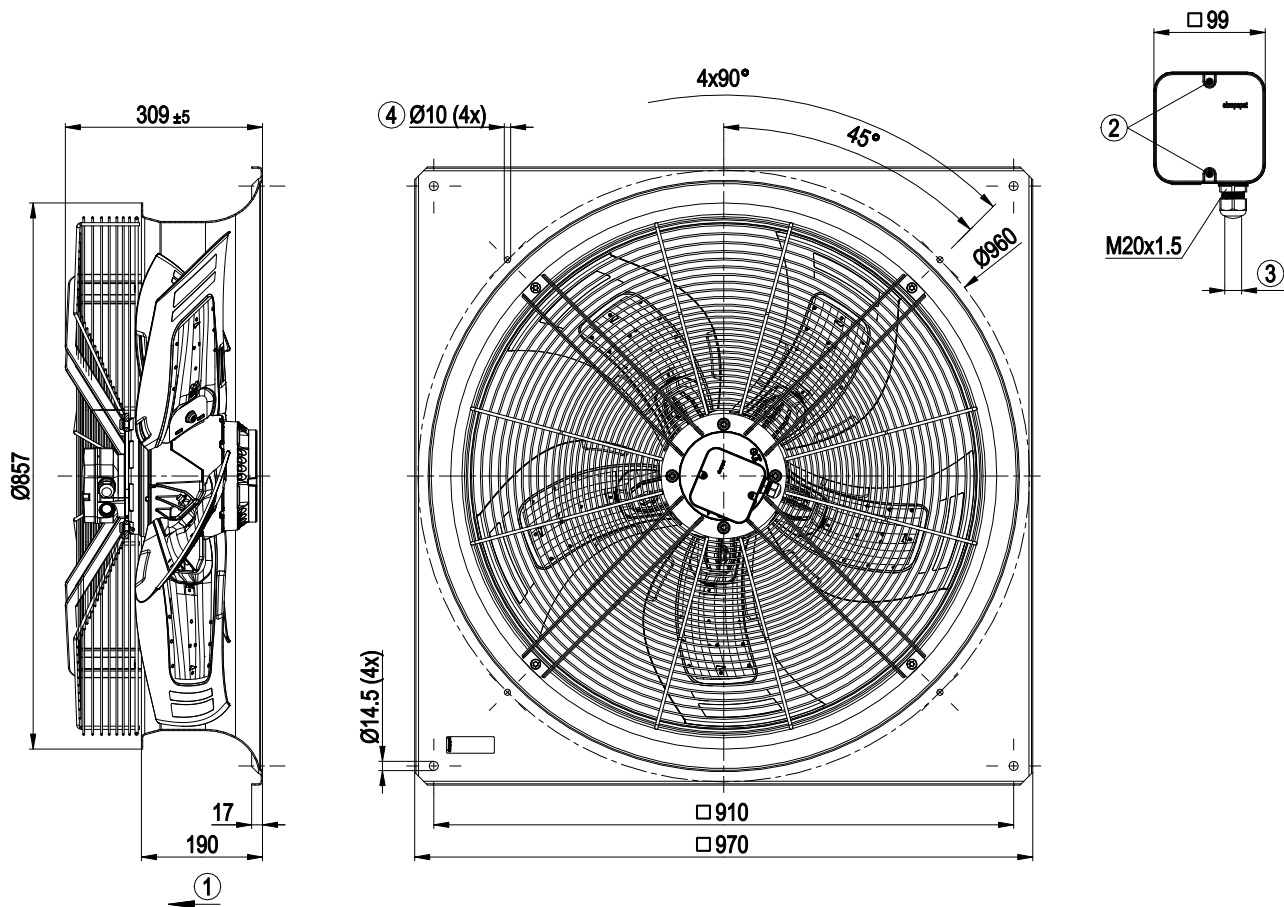


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## Product drawing



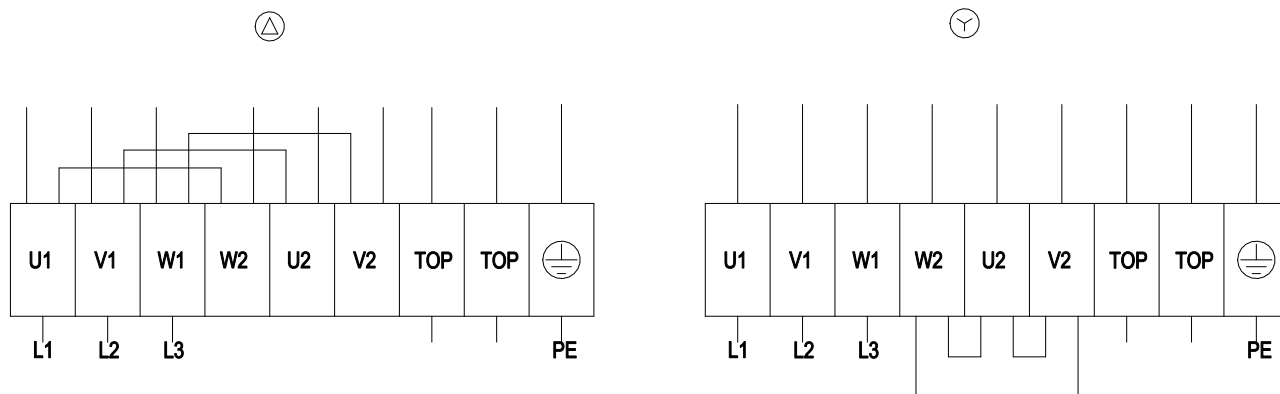
1	Airflow direction "V"
2	Tightening torque $1.5 \pm 0.2$ Nm
3	Cable diameter min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm
4	Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

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## Connection diagram



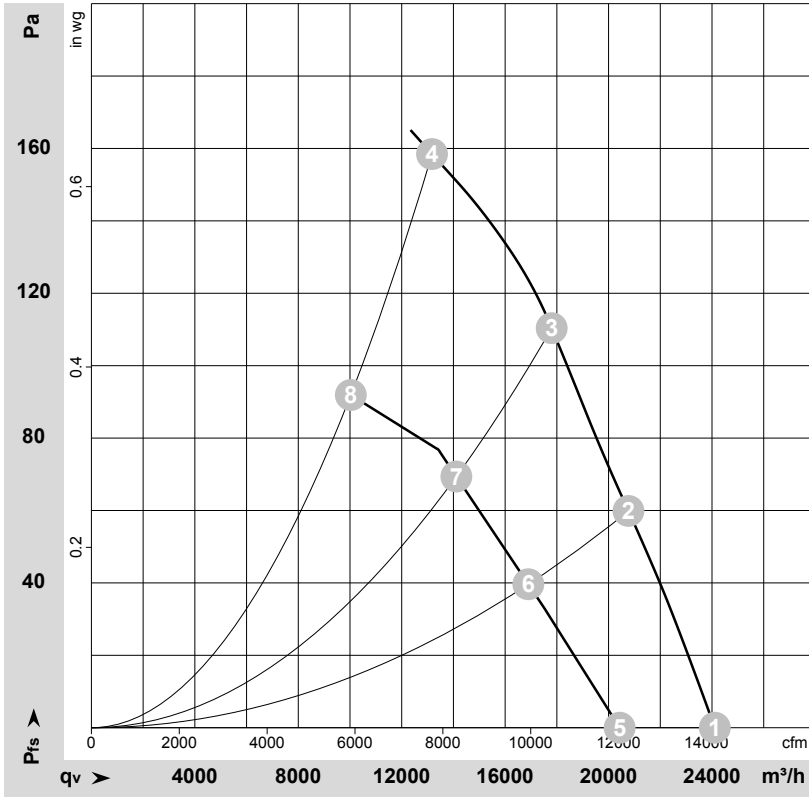
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-113998-1  
Measurement: LU-115288-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

	Wired	U	f	n	$P_e$	I	$LpA_{in}$	$LwA_{in}$	$LwA_{out}$	$q_v$	$p_{fs}$	$q_v$	$p_{fs}$
		V	Hz	$\text{min}^{-1}$	W	A	dB(A)	dB(A)	dB(A)	$\text{m}^3/\text{h}$	Pa	cfm	in. wg
1	$\Delta$	400	50	925	1380	3.30	65	72	72	24110	0	14190	0.00
2	$\Delta$	400	50	910	1585	3.44	65	72	71	20770	60	12225	0.24
3	$\Delta$	400	50	900	1725	3.61	67	73	72	17800	110	10475	0.44
4	$\Delta$	400	50	880	1940	3.90	70	77	77	13170	160	7755	0.64
5	Y	400	50	780	1000	1.85	61	68	67	20430	0	12025	0.00
6	Y	400	50	735	1080	1.98	60	66	66	16895	40	9945	0.16
7	Y	400	50	710	1133	2.08	60	67	66	14115	69	8305	0.28
8	Y	400	50	670	1210	2.23	63	70	69	10030	92	5905	0.37

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) ·  $P_e$  = Power consumption · I = Current draw ·  $LpA_{in}$  = Sound pressure level intake side ·  $LwA_{in}$  = Sound power level intake side  
 $LwA_{out}$  = Sound power level outlet side ·  $q_v$  = Air flow ·  $p_{fs}$  = Pressure increase

